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COUNCIL DIRECTIVE (EU) 2015/652

of 20 April 2015

laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC of the European Parliament and of the Council relating to the quality of petrol and diesel fuels

(OJ L 107, 25.4.2015, p. 26)

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COUNCIL DIRECTIVE (EU) 2015/652

of 20 April 2015

laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC of the European Parliament and of the Council relating to the quality of petrol and diesel fuels

Article 1

Subject matter — Scope

1. This Directive lays down rules on calculation methods and reporting requirements in accordance with Directive 98/70/EC.

2. This Directive applies to fuels used to propel road vehicles, non-road mobile machinery (including inland waterway vessels when not at sea), agricultural and forestry tractors, recreational craft when not at sea and electricity for use in road vehicles.

Article 2

Definitions

For the purposes of this Directive, and in addition to the definitions already contained in Directive 98/70/EC, the following definitions apply:

(1) 'upstream emissions' means all greenhouse gas emissions occurring prior to the raw material entering a refinery or a processing plant where the fuel, as referred to in Annex I, was produced;

(2) 'natural bitumen' means any source of refinery raw material that:

(a) has an American Petroleum Institute (API) gravity of 10 degrees or less when situated in a reservoir formation at the place of extraction as defined pursuant to the testing method of the American Society for Testing and Materials (ASTM) [1] D287;

(b) has an annual average viscosity at reservoir temperature greater than that calculated by the equation: Viscosity (Centipoise) $= 518{,}98^{e-0{,}038T}$, where T is the temperature in Celsius;

(c) falls within the definition for tar sands under combined nomenclature (CN) code 2714 as outlined in Council Regulation (EEC) No 2658/87 [2]; and

(d) where the mobilisation of the source of the raw material is achieved by mining extraction or thermally enhanced gravity drainage where the thermal energy is mainly derived from sources other than the feedstock source itself;

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[1] American Society for Testing and Materials: http://www.astm.org/index.shtml
[2] Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff (OJ L 256, 7.9.1987, p. 1).

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(3) 'oil shale' means any source of refinery raw material as situated in a rock formation containing solid kerogen and falling within the definition for oil shale under CN code 2714 as outlined in Regulation (EEC) No 2658/87. Mobilisation of the source of the raw material is achieved by mining extraction or thermally enhanced gravity drainage;

(4) 'fuel baseline standard' means a fuel baseline standard based on the life cycle greenhouse gas emissions per unit of energy from fossil fuels in 2010;

(5) 'conventional crude' means any refinery raw material exhibiting an API gravity that is higher than 10 degrees when situated in a reservoir formation at its place of origin as measured per testing method ASTM D287, and not falling within the definition for CN code 2714 as set out in Regulation (EEC) No 2658/87.

Article 3

Method for calculating the greenhouse gas intensity of fuels and energy supplied other than biofuels and reporting by suppliers

1. For the purposes of Article 7a(2) of Directive 98/70/EC, Member States shall ensure that suppliers use the calculation method set out in Annex I to this Directive to determine the greenhouse gas intensity of the fuels they supply.

2. For the purposes of the second subparagraph of Article 7a(1) and of Article 7a(2) of Directive 98/70/EC, Member States shall require suppliers to report data using the definitions and the calculation method set out in Annex I to this Directive. The data shall be reported annually using the template set out in Annex IV to this Directive.

3. For the purposes of Article 7a(4) of Directive 98/70/EC, any Member State shall ensure that a group of suppliers choosing to be considered as a single supplier meets its obligation under Article 7a(2) within that Member State.

4. For suppliers that are SMEs, Member States shall apply the simplified method set out in Annex I to this Directive.

Article 4

Calculation of fuel baseline standard and greenhouse gas intensity reduction

For the purposes of verifying compliance by suppliers with their obligation under Article 7a(2) of Directive 98/70/EC, Member States

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shall require suppliers to compare their achieved reductions of life cycle greenhouse gas emissions from fuels and from electricity to the fuel baseline standard set out in Annex II to this Directive.

Article 5

Reporting by Member States

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1. Each year by 31 December Member States shall provide the Commission with data for the preceding calendar year related to compliance with Article 7a of Directive 98/70/EC, as defined in Annex III to this Directive.

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2. Member States shall use the ReportNet tools of the European Environment Agency provided pursuant to Regulation (EC) No 401/2009 of the European Parliament and of the Council (¹) for the submission of the data set out in Annex III to this Directive. The data shall be transmitted by the Member States by means of electronic data transfer to the Central Data Repository managed by the European Environment Agency.

3. The data shall be provided annually using the template set out in Annex IV. Member States shall notify the Commission of the date of transmission and the contact name of the competent authority responsible for verifying and reporting the data to the Commission.

Article 6

Penalties

Member States shall lay down the rules on penalties applicable to infringements of national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive. Member States shall notify those provisions to the Commission by 21 April 2017 and shall notify it without delay of any subsequent amendment affecting them.

Article 7

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 21 April 2017 at the latest. They shall immediately inform the Commission thereof.

2. When Member States adopt those measures, they shall contain a reference to this Directive or shall be accompanied by such a reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

3. Member States shall communicate to the Commission the text of the main measures of national law which they adopt in the field covered by this Directive.

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(¹) Regulation (EC) No 401/2009 of the European Parliament and of the Council of 23 April 2009 on the European Environment Agency and the European Environment Information and Observation Network (OJ L 126, 21.5.2009, p. 13).

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Article 8

Entry into force

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union.*

Article 9

Addressees

This Directive is addressed to the Member States.

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ANNEX I

METHOD FOR THE CALCULATION AND REPORTING OF THE LIFE CYCLE GREENHOUSE GAS INTENSITY OF FUELS AND ENERGY BY SUPPLIERS

Part 1

Calculation of a supplier's greenhouse gas intensity of fuels and energy

The greenhouse gas intensity for fuels and energy is expressed in terms of grams of carbon dioxide equivalent per mega joule of fuel (gCO_{2eq}/MJ).

1. The greenhouse gases taken into account for the purposes of calculating the greenhouse gas intensity of fuel is carbon dioxide (CO_2), nitrous oxide (N_2O) and methane (CH_4). For the purpose of calculating CO_2 equivalence, emissions of those gases are valued in terms of CO_2 equivalent emissions, as follows:

   CO_2: 1; CH_4: 25; N_2O: 298

2. Emissions from the manufacture of machinery and equipment utilised in extraction, production, refining and consumption of fossil fuels are not taken into account in the greenhouse gas calculation.

3. A supplier's greenhouse gas intensity from the life cycle greenhouse gas emissions of all fuels and energy supplied shall be calculated in accordance with the formula below:

$$\text{A supplier's greenhouse gas intensity}_{(\#)} = \frac{\sum_{x}(\blacktriangleright\textbf{C1}\ GHGi_x \blacktriangleleft \times AF \times MJ_x) - UER}{\sum_{x} MJ_x}$$

where:

(a) '#' means the supplier's identification (i.e. the identification of the entity liable to pay excise duty) defined in Commission Regulation (EC) No 684/2009 ([1]) as the Trader Excise Number (System for Exchange of Excise Data (SEED) registration number or value added tax (VAT) identification number in point 5(a) of Table 1 of Annex I to that Regulation for Destination Type codes 1 to 5 and 8), which is also the entity liable to pay the excise duty in accordance with Article 8 of Council Directive 2008/118/EC ([2]) at the time that excise duty became chargeable in accordance with Article 7(2) of Directive 2008/118/EC. If this identification is not available, Member States shall ensure that an equivalent means of identification is established in accordance with a national excise duty reporting scheme;

(b) 'x' means the fuel and energy types falling within the scope of this Directive as expressed in point17(c) of Table 1 of Annex I to Regulation

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([1]) Commission Regulation (EC) No 684/2009 of 24 July 2009 implementing Council Directive 2008/118/EC as regards the computerised procedures for the movement of excise goods under suspension of excise duty (OJ L 197, 29.7.2009, p. 24).

([2]) Council Directive 2008/118/EC of 16 December 2008 concerning the general arrangements for excise duty and repealing Directive 92/12/EEC (OJ L 9, 14.1.2009, p. 12).

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(EC) No 684/2009. If these data are not available, Member States shall collect equivalent data in accordance with a nationally established excise duty reporting scheme;

(c) 'MJ$_x$' means the total energy supplied and converted from reported volumes of fuel 'x' expressed in mega joules. This is calculated as follows:

(i) The quantity of each fuel per fuel type

It is derived from data reported pursuant to points 17(d), (f) and (o) of Table 1 of Annex I to Regulation (EC) No 684/2009. Biofuel quantities are converted to their lower-heat-value energy content pursuant to the energy densities set out in Annex III to Directive 2009/28/EC. Quantities of fuels from non-biological origin are converted to their lower-heat-value energy content pursuant to energy densities set out in Appendix 1 to the Joint Research Centre-EUCAR-CONCAWE (JEC) [1] Well-to-Tank report (version 4) of July 2013 [2];

(ii) Simultaneous co-processing of fossil fuels and biofuels

Processing includes any modification during the life cycle of a fuel or energy supplied causing a change to the molecular structure of the product. The addition of denaturant does not fall under this processing. The quantity of biofuels co-processed with fuels from non-biological origin reflects the post-processing state of the biofuel. The quantity of the co-processed biofuel is determined according to the energy balance and efficiency of the co-processing process as set out in point 17 of Part C of Annex IV to Directive 98/70/EC.

Where multiple biofuels are blended with fossil fuels, the quantity and type of each biofuel is taken into account in the calculation and reported by suppliers to the Member States.

The quantity of biofuel supplied that does not meet the sustainability criteria referred to in Article 7b(1) of Directive 98/70/EC is counted as fossil fuel.

E85 petrol-ethanol blend shall be calculated as a separate fuel for the purpose of Article 6 of Regulation (EC) No 443/2009 of the European Parliament and of the Council [3].

If quantities are not collected pursuant to Regulation (EC) No 684/2009, Member States shall collect equivalent data in accordance with a nationally established excise duty reporting scheme;

(iii) Quantity of electricity consumed

This is the amount of electricity consumed in road vehicles or motor-cycles where a supplier reports this amount of energy to the relevant authority in each Member State in accordance with the following formula:

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[1] The JEC consortium brings together the European Commission Joint Research Centre (JRC), EUCAR (European Council for Automotive R&D) and CONCAWE (the oil companies' European association for environment, health and safety in refining and distribution).

[2] http://iet.jrc.ec.europa.eu/about-jec/sites/about-jec/files/documents/report_2013/wtt_report_v4_july_2013_final.pdf

[3] Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO_2 emissions from light-duty vehicles (OJ L 140, 5.6.2009, p. 1).

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Electricity consumed = distance travelled (km) × electricity consumption efficiency (MJ/km);

(d) Upstream emission reduction (UER)

'UER' is the upstream emission reduction of greenhouse gases claimed by a supplier, measured in gCO_{2eq} if quantified and reported in accordance with the following requirements:

(i) Eligibility

UERs shall only be applied to the upstream emission's part of the average default values for petrol, diesel, CNG or LPG.

UERs originating from any country may be counted as a reduction in greenhouse gas emissions against fuels from any feedstock source supplied by any supplier.

UERs shall only be counted if they are associated with projects that have started after 1 January 2011.

It is not necessary to prove that UERs would not have taken place without the reporting requirement set out in Article 7a of Directive 98/70/EC;

(ii) Calculation

UERs shall be estimated and validated in accordance with principles and standards identified in International Standards, and in particular ISO 14064, ISO 14065 and ISO 14066.

The UERs and baseline emissions are to be monitored, reported and verified in accordance with ISO 14064 and providing results of equivalent confidence of Commission Regulation (EU) No 600/2012 ([1]) and Commission Regulation (EU) No 601/2012 ([2]). The verification of methods for estimating UERs must be done in accordance with ISO 14064-3 and the organisation verifying this must be accredited in accordance with ISO 14065;

(e) 'GHGi$_x$' is the greenhouse gas intensity of fuel or energy 'x' expressed in gCO_{2eq}/MJ. Suppliers shall calculate the greenhouse gas intensity of each fuel or energy as follows:

(i) Greenhouse gas intensity of fuels from a non-biological origin is the 'weighted life cycle greenhouse gas intensity' per fuel type listed in the last column of the table under point 5 of Part 2 of this Annex;

(ii) Electricity is calculated as described in point 6 of Part 2;

(iii) Greenhouse gas intensity of biofuels

The greenhouse gas intensity of biofuels meeting the sustainability criteria referred to in Article 7b(1) of Directive 98/70/EC is calculated in accordance with Article 7d of that Directive. In case data on the life cycle greenhouse gas emissions of biofuels was obtained in accordance with an agreement or scheme that has been the subject of a decision pursuant to Article 7c(4) of Directive 98/70/EC covering Article 7b(2) of that Directive, this data is also to be used to establish the greenhouse gas intensity of

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([1]) Commission Regulation (EU) No 600/2012 of 21 June 2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council (OJ L 181, 12.7.2012, p. 1).

([2]) Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council (OJ L 181, 12.7.2012, p. 30).

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biofuels under Article 7b(1) of that Directive. The greenhouse gas intensity for biofuels not meeting the sustainability criteria referred to in Article 7b(1) of Directive 98/70/EC is equal to the greenhouse intensity of the respective fossil fuel derived from conventional crude oil or gas;

(iv) Simultaneous co-processing of fuels from non-biological origin and biofuels

The greenhouse gas intensity of biofuels co-processed with fossil fuels shall reflect the post-processing state of the biofuel;

(f) 'AF' represents the adjustment factors for powertrain efficiencies:

Predominant conversion technology	Efficiency factor
Internal combustion engine	1
Battery electric powertrain	0,4
Hydrogen fuel cell electric powertrain	0,4

Part 2

Reporting by suppliers for fuels other than biofuels

1. UERs of fossil fuels

In order for UERs to be eligible for the purposes of the reporting and calculation method, suppliers shall report the following to the authority designated by the Member States:

(a) the starting date of the project, which must be after 1 January 2011;

(b) the annual emission reductions in gCO_{2eq};

(c) the duration for which the claimed reductions occurred;

(d) the project location closest to the source of the emissions in latitude and longitude coordinates in degrees to the fourth decimal place;

(e) the baseline annual emissions prior to installation of reduction measures and annual emissions after the reduction measures have been implemented in gCO_{2eq}/MJ of feedstock produced;

(f) the non-reusable certificate number uniquely identifying the scheme and the claimed greenhouse gas reductions;

(g) the non-reusable number uniquely identifying the calculation method and the associated scheme.

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5. Average life cycle greenhouse gas intensity default values for fuels other than biofuels and electricity

Raw material source and process	Fuel placed on the market	Life cycle GHG intensity (gCO_{2eq}/MJ)	Weighted life cycle GHG intensity (gCO_{2eq}/MJ)
Conventional crude	Petrol	93,2	93,3
Natural Gas-to-Liquid		94,3	
Coal-to-Liquid		172	
Natural bitumen		107	
Oil shale		131,3	
Conventional crude	Diesel or gasoil	95	95,1
Natural Gas-to-Liquid		94,3	
Coal-to-Liquid		172	
Natural bitumen		108,5	
Oil shale		133,7	
Any fossil sources	Liquefied Petroleum Gas in a spark ignition engine	73,6	73,6
Natural Gas, EU mix	Compressed Natural Gas in a spark ignition engine	69,3	69,3
Natural Gas, EU mix	Liquefied Natural Gas in a spark ignition engine	74,5	74,5
Sabatier reaction of hydrogen from non-biological renewable energy electrolysis	Compressed synthetic methane in a spark ignition engine	3,3	3,3
Natural gas using steam reforming	Compressed Hydrogen in a fuel cell	104,3	104,3
Electrolysis fully powered by non-biological renewable energy	Compressed Hydrogen in a fuel cell	9,1	9,1
Coal	Compressed Hydrogen in a fuel cell	234,4	234,4
Coal with Carbon Capture and Storage of process emissions	Compressed Hydrogen in a fuel cell	52,7	52,7
Waste plastic derived from fossil feedstocks	Petrol, diesel or gasoil	86	86

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6. Electricity

For the reporting by energy suppliers of electricity consumed by electric vehicles and motorcycles, Member States should calculate national average life cycle default values in accordance with appropriate International Standards.

Alternatively, Member States may permit their suppliers to establish greenhouse gas intensity values (gCO_{2eq}/MJ) for electricity from data reported by Member States on the basis of:

(a) Regulation (EC) No 1099/2008 of the European Parliament and of the Council ([1]);

(b) Regulation (EU) No 525/2013 of the European Parliament and of the Council ([2]); or

(c) Commission Delegated Regulation (EU) No 666/2014 ([3]).

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([1]) Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics (OJ L 304, 14.11.2008, p. 1).

([2]) Regulation (EU) No 525/2013 of the European Parliament and of the Council of 21 May 2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change and repealing Decision No 280/2004/EC (OJ L 165, 18.6.2013, p. 13).

([3]) Commission Delegated Regulation (EU) No 666/2014 of 12 March 2014 establishing substantive requirements for a Union inventory system and taking into account changes in the global warming potentials and internationally agreed inventory guidelines pursuant to Regulation (EU) No 525/2013 of the European Parliament and of the Council (OJ L 179, 19.6.2014, p. 26).

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ANNEX II

CALCULATION OF THE FUEL BASELINE STANDARD OF FOSSIL FUELS

Calculation method

(a) The fuel baseline standard is calculated based on Union average fossil fuel consumption of petrol, diesel, gasoil, LPG and CNG, as follows:

$$\text{Fuel baseline standard} = \frac{\sum_x (GHGi_x \times MJ_x)}{\sum_x MJ_x}$$

where:

'x' represents the different fuels and energy falling within the scope of this Directive and as defined in the table below;

'$GHGi_x$' is the greenhouse gas intensity of the annual supply sold on the market of fuel 'x' or energy falling within the scope of this Directive expressed in gCO_{2eq}/MJ. The values for fossil fuels presented in point 5 of Part 2 of Annex I are used;

'MJ_x' is the total energy supplied and converted from reported volumes of fuel 'x' expressed in mega joules.

(b) Consumption data

The consumption data used for calculation of the value is as follows:

Fuel	Energy Consumption (MJ)	Source
diesel	$7\ 894\ 969 \times 10^6$	
non-road gasoil	$240\ 763 \times 10^6$	
petrol	$3\ 844\ 356 \times 10^6$	2010 Member States reporting to the UNFCCC
LPG	$217\ 563 \times 10^6$	
CNG	$51\ 037 \times 10^6$	

Greenhouse gas intensity

The fuel baseline standard for 2010 shall be: 94,1 gCO_{2eq}/MJ

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ANNEX III

MEMBER STATE REPORTING TO THE COMMISSION

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1. Member States are to report the data listed in point 3. Those data must be reported for all fuel and energy placed on the market in each Member State. Where multiple biofuels are blended with fossil fuels, the data for each biofuel must be provided.

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2. The data listed in point 3 are to be reported separately for fuel or energy placed on the market by suppliers within a given Member State (including joint suppliers operating in a single Member State).

3. For each fuel and energy, Member States are to report the following data to the Commission, as aggregated according to point 2 and as defined in Annex I:

   (a) fuel or energy type;

   (b) volume or quantity of fuel or electricity;

   (c) greenhouse gas intensity;

   (d) UERs.

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ANNEX IV

TEMPLATE FOR REPORTING INFORMATION FOR CONSISTENCY OF THE REPORTED DATA

Fuel — Single Suppliers

Entry	Joint Reporting (YES/NO)	Country	Supplier[1]	Fuel type[7]	Fuel CN code[7]	Quantity[2]		Average GHG intensity	Upstream Emission Reduction[5]	Reduction on 2010 average
						by litres	by energy			
1										
		CN code	GHG intensity[4]	Feedstock	CN code	GHG intensity[4]	sustainable (YES/NO)			
		Component F.1 (Fossil Fuel Component)		Component B.1 (Biofuel Component)						
		Component F.n (Fossil Fuel Component)		Component B.m (Biofuel Component)						
k										
		CN code[2]	GHG intensity[4]	Feedstock	CN code[2]	GHG intensity[4]	sustainable (YES/NO)			
		Component F.1 (Fossil Fuel Component)		Component B.1 (Biofuel Component)						
		Component F.n (Fossil Fuel Component)		Component B.m (Biofuel Component)						

Fuel — Joint Suppliers

Entry	Joint Reporting (YES/NO)	Country	Supplier[1]	Fuel type[7]	Fuel CN code[7]	Quantity[2]		Average GHG intensity	Upstream Emission Reduction[5]	Reduction on 2010 average
						by litres	by energy			
I	YES									
	YES									
	Subtotal									
		CN code	GHG intensity[4]	Feedstock	CN code	GHG intensity[4]	sustainable (YES/NO)			
		Component F.1 (Fossil Fuel Component)		Component B.1 (Biofuel Component)						
		Component F.n (Fossil Fuel Component)		Component B.m (Biofuel Component)						

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Entry	Joint Reporting (YES/NO)	Country	Supplier[1]	Fuel type[7]	Fuel CN code[7]	Quantity[2]		Average GHG intensity	Upstream Emission Reduction[5]	Reduction on 2010 average
						by litres	by energy			
	YES									
	YES									
		Subtotal								
		CN code[2]	GHG intensity[4]	Feedstock	CN code[2]	GHG intensity[4]	sustainable (YES/NO)			
x		Component F.1 (Fossil Fuel Component)		Component B.1 (Biofuel Component)						
		Component F.n (Fossil Fuel Component)		Component B.m (Biofuel Component)						

Electricity

Joint Reporting	Country	Supplier[1]	Energy type[7]	Quantity[6]	GHG intensity	Reduction on 2010 average
				by energy		
NO						
			Joint Supplier Information			
	Country	Supplier[1]	Energy type[7]	Quantity[6]	GHG intensity	Reduction on 2010 average
				by energy		
YES						
YES						
	Subtotal					

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Total energy reported and reduction achieved per Member State

Volume (by energy)[10]	GHG intensity	Reduction on 2010 average

Format Notes

The template for supplier reporting is identical to the template for Member State reporting.

Shaded cells do not have to be filled in.

1. Supplier identification is defined in point 3(a) of Part 1 of Annex I;

2. Quantity of fuel is defined in point 3(c) of Part 1 of Annex I;

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3. American Petroleum Institute (API) gravity is defined pursuant to testing method ASTM D287;

4. Greenhouse gas intensity is defined in point 3(e) of Part 1 of Annex I;

5. UER is defined in point 3(d) of Part 1 of Annex I; reporting specifications are defined in point 1 of Part 2 of Annex I;

6. Quantity of electricity is defined in point 6 of Part 2 of Annex I;

7. Fuel types and corresponding CN codes are defined in point 3(b) of Part 1 of Annex I;

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10. Total quantity of energy (fuel and electricity) consumed.